

Biographical sketch

Christel Hohenegger

(a) Professional Preparation

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|---|-------------|--------------|
| • Swiss Federal Institute of Technology (ETH), Zürich | Mathematics | Diploma 2001 |
| • Georgia Institute of Technology | Mathematics | Ph.D. 2006 |
| • University of North Carolina, Chapel Hill | Mathematics | 2006 – 2007 |
| • New York University | Mathematics | 2007-2010 |

(b) Appointments

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| • Assistant Professor, Mathematics, University of Utah, Salt Lake City, UT | 2010 – present |
| • Research Scientist, Courant Institute, New York University | 2007 – 2010 |
| • Postdoctoral Fellow, Department of Mathematics, University of North Carolina | 2006 – 2007 |

(c) Products

(i) Publications closely related to the proposed project

- [1] C. H. Tan, C. Hohenegger, and B. Osting, A variational characterization of fluid sloshing with surface tension, *SIAM Journal on Applied Mathematics* **77**(3) 995–1019 (2017) <http://dx.doi.org/10.1137/16M1104330>
- [2] S. Cook, C. Hohenegger, and T. Shinar, A Micro-Macro Framework for Analyzing Steric and Hydrodynamic Interactions in Gliding Assays, *SIAM Multiscale and Modeling Simulation*, in press
- [3] C. Hohenegger, S. Cook, and T. Shinar, Fluid coupling in continuum modeling of microtubule motility assays, *SIAM Applied Mathematics*, bf 74(5) 1338-1353 (2014). <https://doi.org/10.1137/140961535>
- [4] C. Hohenegger and M. J. Shelley, On the stability of active suspensions, *Physical Review E*, **81**:046311 (2010) <https://doi.org/10.1103/physreve.81.046311>
- [5] C. Hohenegger and M. G. Forest, Two-bead microrheology: modeling protocols, *Physical Review E*, **78**:031501 (2008) <https://doi.org/10.1103/physreve.78.031501>

(ii) Other important publications

- [1] C. Hohenegger and S. A. McKinley, Fluid-particle dynamics for passive tracers advected by a thermally fluctuating viscoelastic medium, *Journal of Computational Physics*, **340** 688–711 (2017)
- [2] C. H. Tan, C. Hohenegger, and B. Osting, A variational characterization of fluid sloshing with surface tension, *SIAM Journal on Applied Mathematics* **77**(3) 995–1019 (2017) <http://dx.doi.org/10.1137/16M1104330>

- [3] C. Hohenegger, On equipartition of energy and integrals of Generalized Langevin Equations with generalized Rouse kernel, *Communication in Mathematical Sciences* **15**(2) 539–554 (2017) <http://dx.doi.org/10.4310/CMS.2017.v15.n2.a10>
- [4] C. Hohenegger, R. Durr, and D. M. Senter. Estimating first passage time in fluids with memory using a covariance based algorithm, *Journal of Non-Newtonian Fluid Dynamics* **242** 48–56 (2017) <http://dx.doi.org/10.4310/CMS.2017.v15.n2.a10>
- [5] C. Hohenegger, B. Alali, K. R. Steffen, D. K. Perovich, and K. M. Golden, Transition in the geometry of Arctic melt ponds, *In: The Cryosphere*, **6** 1157–1162 (2012). <http://dx.doi.org/doi:10.5194/tc-6-1157-2012>

(d) Synergistic activities

- [1] Faculty advisor for the AWM student group at the University of Utah (2011-present);
- [2] Faculty member graduate recruitment committee (2015-2017) and graduate student committee (2017-present);
- [3] Reviewer for Physical Review E, Physical Review Letters, and SIAM Journal on Applied Mathematics.
- [4] Session organizer: AMS Western Sectional Meeting in Salt Lake City (Fall 2011, Bio-fluids), SIAM Material Sciences (June 2013, Fluctuating Hydrodynamics, S. McKinley, A. Donev), SIAM Computational Sciences (March 2014, Computational Approaches and Multi-scale Modeling of Complex Fluids, E. Lushi);
- [5] Mentor for four undergraduate REUs (M. D Senter, currently a graduate student at UNC, 2013-2015; R. Durr, 2013-2014; M. Carlson (together with B. Osting, currently a graduate student at U. of Utah in Computer Sciences), 2016-2017); A. Lee, 2016-present)